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| 09/976,565      | 10/12/2001  | Kenneth Douros       | 29248/AP01952       | 1453             |

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| EXAMINER |
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MARC COLEMAN, MARTHE Y

| ART UNIT | PAPER NUMBER |
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3661

DATE MAILED: 01/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/976,565

Applicant(s)

DOUROS ET AL.

Examiner

Marthe Y Marc-Coleman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 20-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 14.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. This office action is in response to amendment filed on 10/14/03.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 20-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over ENHSSON PN (WO 92/03803) in view of VAN DER VOORT (WO 00/07150).

**In regard to claim 20**, Enhsson discloses a method of informing a vehicle operator to improve the operator's performance, the method comprising the steps of:

- receiving vehicle operating data from the vehicle relating to the vehicle operating condition (see page 6 lines 14-33 and page 8 lines 15-18);
- monitoring an interior portion of the vehicle and receiving operator activity data from the interior portion of the vehicle relating to activities of the operator within the interior portion (see page 6 lines 14-22 and page 7 lines 1-26);
- receiving vehicle environment data from the environment external to the vehicle (see col. 6 lines 14-33);
- monitoring the vehicle operator and receiving operator condition data relating to a condition of the vehicle operator (see col. 7 lines 1-19);

- estimating an operator cognitive load (see page 7).

Enhsson fails to disclose prioritizing vehicle information based upon the operator cognitive load for selectively informing the operator of the vehicle information .

Van Der Voort discloses prioritizing vehicle information based upon the operator cognitive load for selectively informing the operator of the vehicle information (see page 2 line 30-page 3 line 20).

At the time of the invention, it would have been obvious to one skilled in the art to utilize Van Der Voort's prioritized information with Enhsson traffic safety system because it would induce the driver of the vehicle to adopt a more efficient driving style.

**In regard to claim 29**, Enhsson discloses a method of providing information to an operator of a vehicle comprising:

- generating a master condition list, the master condition list being a fusion of sensor data within the vehicle (see page 8 lines 22-26 and Fig. 1);
- determining an operating situation of the vehicle based on the master condition list (see pages 7-8);

Enhsson fails to disclose prioritizing information presented to the operator based upon the operating condition.

Van deer Woort discloses prioritizing information presented to the operator based upon the operating condition (see page 2 line 30-page 3 line 20).

At the time of the invention, it would have been obvious to one skilled in the art to utilize Van Deer Voort's prioritized information with Enhsson traffic safety system because it would induce the driver of the vehicle to adopt a more efficient driving style.

**In regard to claim 31**, Enhsson discloses an apparatus for providing information to an operator of a vehicle comprising:

- a sensor fusion module, the sensor fusion module being coupled to a vehicle condition sensor, a vehicle exterior sensor, an operator condition sensor and an operator activity sensor respectively providing to the sensor fusion module vehicle condition data, vehicle environment data, operator condition data and operator activity data, the sensor fusion module operable to provide a master condition list based on the data received by the sensor fusion module (see page 8 lines 22-26 and Fig. 1);
- a response selector coupled to the sensor fusion module being operable to determine a current operating condition based upon the master condition list and to assess an operator action in response to the current operating condition to provide an operator performance assessment values based upon the master condition list and the operator action (see pages 7-8);

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- an action generator coupled to the response selector to generate an indication (see pages 7-9);
- an operator interface coupled to the action generator to convey the indication to the operator (see pages 7-9).

**In regard to claim 21**, Enhsson discloses that the step of estimating an operator cognitive load comprises synthesizing and summarizing the vehicle operating data, the operator activity data, the environment data and the operator condition data (see Fig. 1 and page 8 lines 22-26).

**In regard to claim 22**, Enhsson discloses that the step of synthesizing and summarizing comprises providing a sensor fusion apparatus within the vehicle (see page 8 lines 22-26 and Fig. 1).

**In regard to claim 23**, Enhsson discloses that the step of synthesizing and summarizing comprises determining **at least one of**: a problem condition, a problem correction, a problem exacerbation, an operator task requirement, an agent task requirement, completion of an operator task, completion of an agent task and a situation change (see pages 7-8).

**In regard to claim 24**, Enhsson discloses that the step of estimating a cognitive load comprises determining a measure of work needed to manage a particular task (see page 7).

**In regard to claim 25**, Van deer Woort discloses that the step of prioritizing vehicle information comprises determining existence of an operator task and requesting operator response to the operator task (see page 2 line 30-page 3 line 20).

**In regard to claim 26**, Enhsson discloses that the vehicle information comprises either one of an alert and a warning (see page 8 line 22-page 9 line 7).

**In regard to claims 27 and 28**, Enhsson discloses that the method further comprises receiving operator history data and preference data and wherein the step of estimating operator cognitive load comprises estimating operator cognitive load based in part on the operator history and preference (see pages 7-8).

**In regard to claim 30**, Enhsson discloses that the operating situation comprises determining **at least one of**: a problem condition, a problem correction, a problem exacerbation, an operator task requirement, an agent task requirement, completion of an operator task, completion of an agent task and a situation change (see pages 7-8).

**In regard to claim 32**, Enhsson discloses that the vehicle condition comprises **(at least one of)** vehicle speed, brake application (see page 6 lines 14-27).

**In regard to claim 33**, Enhsson discloses that the operator activity data comprise usage data relating driving control (see page 7).

**In regard to claim 34**, Enhsson discloses that the operator condition data comprises distraction (see abstract).

**In regard to claim 35**, Enhsson discloses that the vehicle environment data comprises data relating to traffic condition or road condition (see page 6 lines 14-27).

**In regard to claims 36-39**, Enhsson discloses that the indication comprises an audio indication, a prerecorded message, prioritized information, conveying an operator task (see pages 7-9).

#### ***Response to Arguments***

4. Applicant's arguments filed 10/14/03 have been fully considered but they are not persuasive.

Applicant argues that Van Der Voort does not qualify as prior art against this application. Examiner respectfully disagrees since Applicant does not provide any proof.



Applicant also argues that "none of the cited references teach the step of or structure for determining cognitive load of a vehicle driver in order for prioritizing vehicle information and selectively informing the operator of the vehicle information".

Examiner disagrees with applicants. Van Der Voort does disclose this limitation on page 2 line 30-page 3 line 20.

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marthe Y Marc-Coleman whose telephone number is (703) 305-4970. The examiner can normally be reached on Monday-Thursday from 9:30 AM - 8:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William A Cuchlinski can be reached on (703) 308-3873. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

Patent Examiner

*Marthe Y. Marc-Coleman*

Marthe Marc-Coleman

January 6, 2004